IBM 3276 Control Unit Display Station Setup Instructions
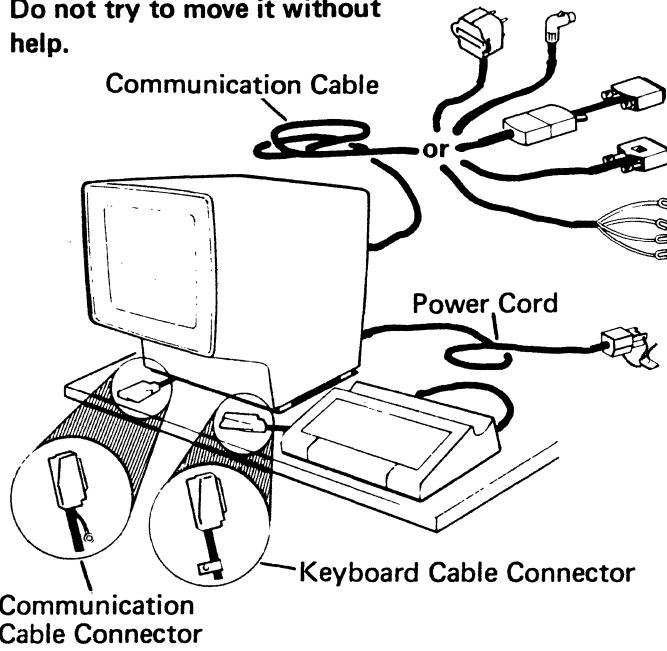
Please follow instructions, step by step, in the sequence that follows.

Actions you should take are indicated by a box (☐), which is also provided you to help you keep track of your progress. Put a check (√) in the box (☑) as you finish each action.

Note: *DO NOT place objects on top of the display. DO NOT block the display vents.*

CAUTION: **The display station weighs about 45 kg (100 lb). Do not try to move it without help.**

Communication Cable

—or—

Power Cord

Keyboard Cable Connector

Communication Cable Connector

Step 1

☐ Obtain the following from your supervisor:
a. **3276 Device Cable Attachment chart,** required for Step 11.
☐ b. **3276 Switch Settings chart,** required for Step 12.
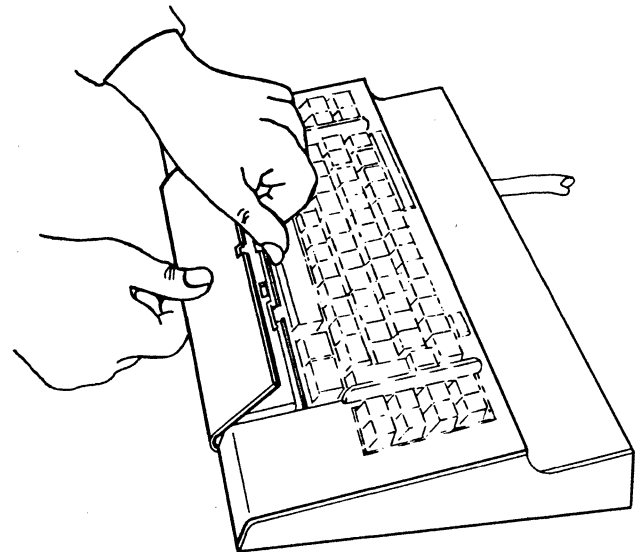☐ c. **Communication Cable Connection Instructions chart,** required for Step 14 or 18.

Illustrations of the above are shown on the last page.

☐ If the Encrypt/Decrypt feature (Identified in Step 13) is installed, get help from your security representative at Step 14.
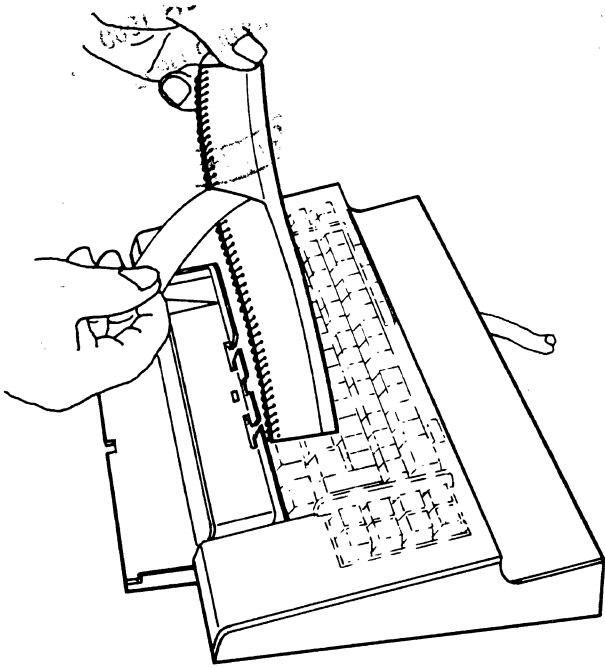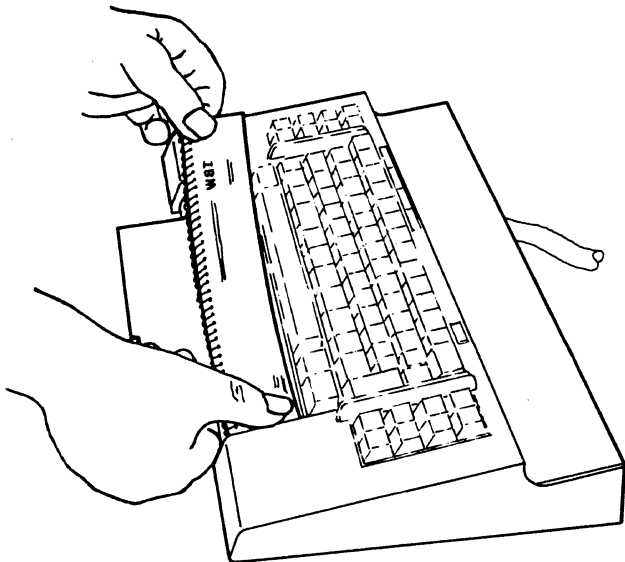
Step 2
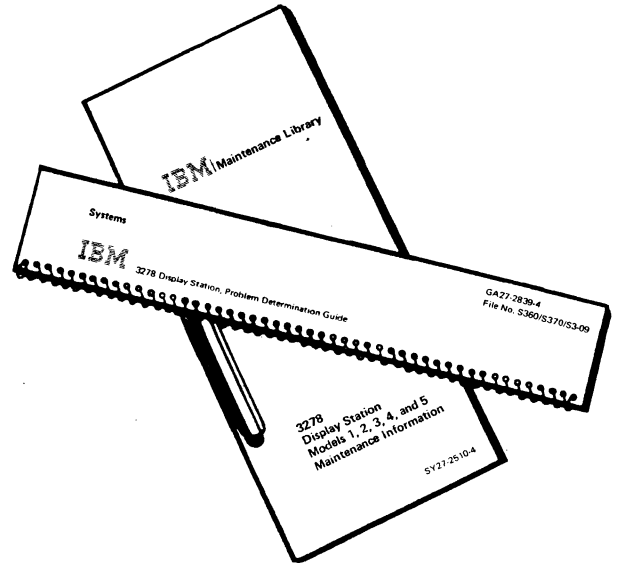
☐ Remove the <u>Problem Determination Guide</u> and the <u>Maintenance Information</u> manual from the envelope.
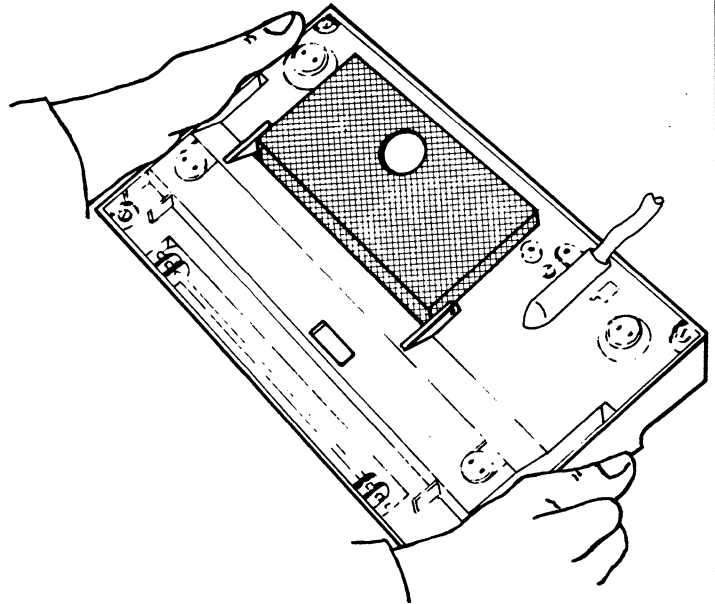
☐ Open the front cover by pressing on the tab.

☐ Remove the backing paper from the Problem Determination Guide.
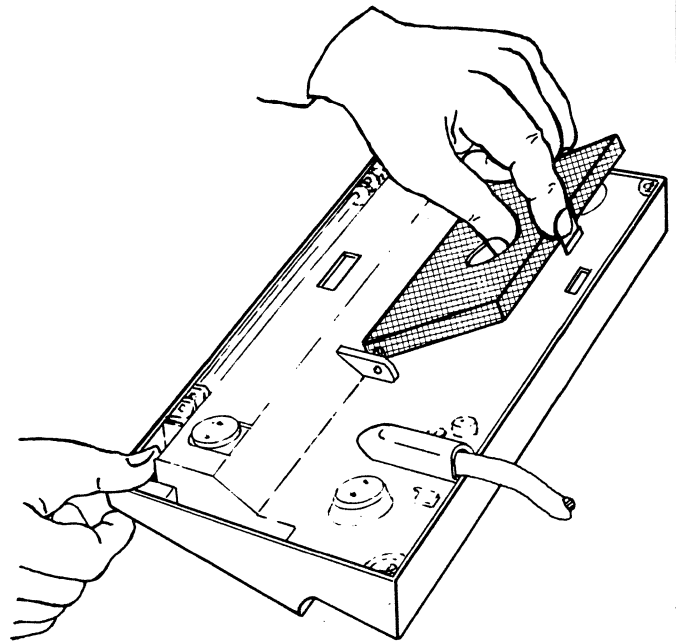
☐ Insert the Problem Determination Guide in the keyboard with the hinged edge toward the front, tap it into place, and close the cover.

Step 3

☐ Turn the keyboard over.

☐ Release the document holder by pressing the catch.
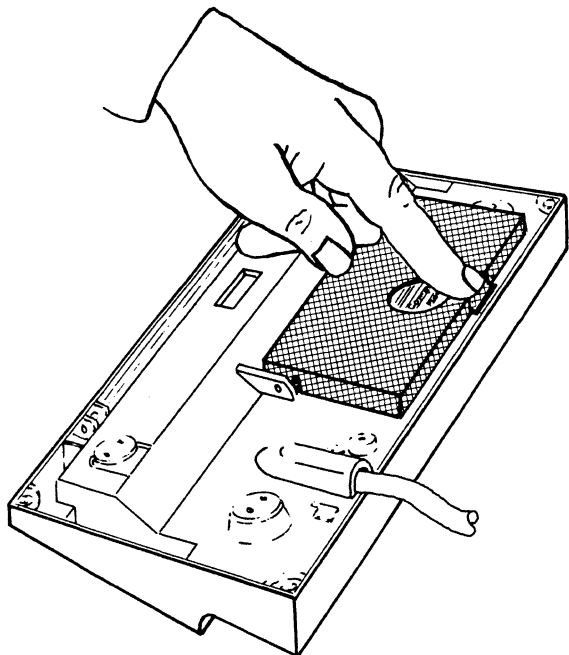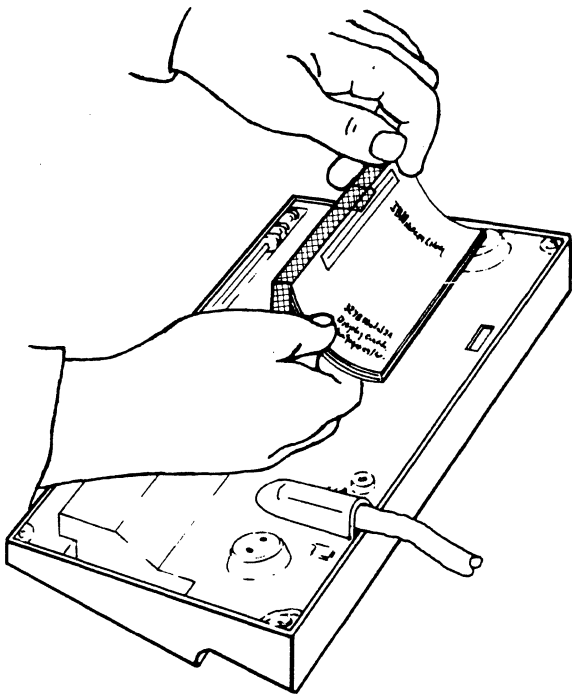
Place the Maintenance Information manual in the holder, and snap it closed.

Step 4

☐ Slide the communication cable [1.8 to 12 meters (6 to 40 feet) long] under the display station, so that the connector end shown at left is accessible from the front of the 3276.

☐ Remove the plastic safety catch if present, from the power cord by breaking the catch. Position the power cord under the display station and extend it toward the power outlet, but do not plug it in at this time.

Plastic Safety Catch

Step 5

Latch

Pivot Pin (behind cover)
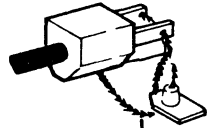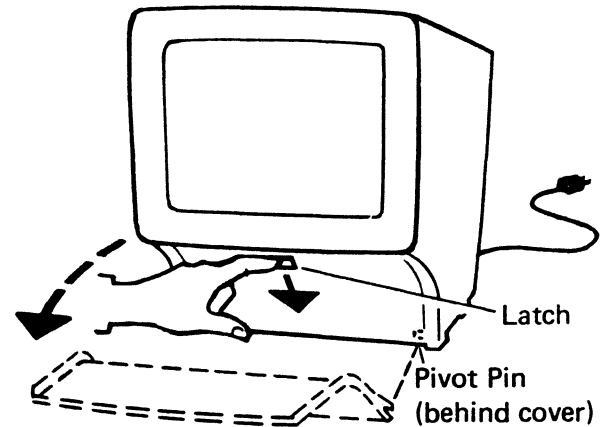
☐ Open the front cover by pushing the latch away from you (toward the machine).
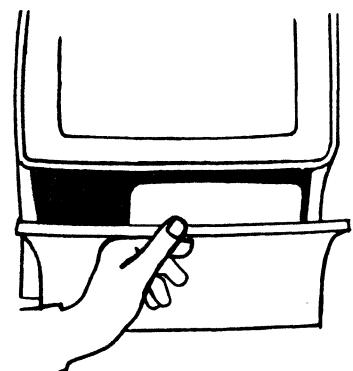
☐ Remove the front cover by lifting it off the pivot pins.

Step 6
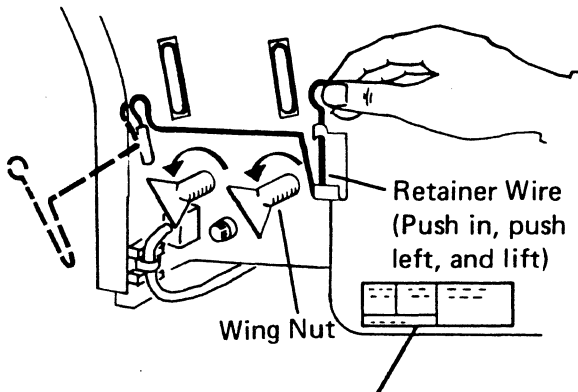
Note: *the voltage and frequency requirements for this unit are indicated on the label.*

☐ Unlatch the retainer wire by pressing in and to the left to clear the latch; then lift and swing to the left. Don't be afraid to apply the necessary force.

☐ Remove the wing nuts.

Retainer Wire (Push in, push left, and lift)

Wing Nut

Retainer Wire in Open Position

I/O — KEYBD

Stud

Fuse

Power Cord

Step 7

Cable Clamp

KEYBD
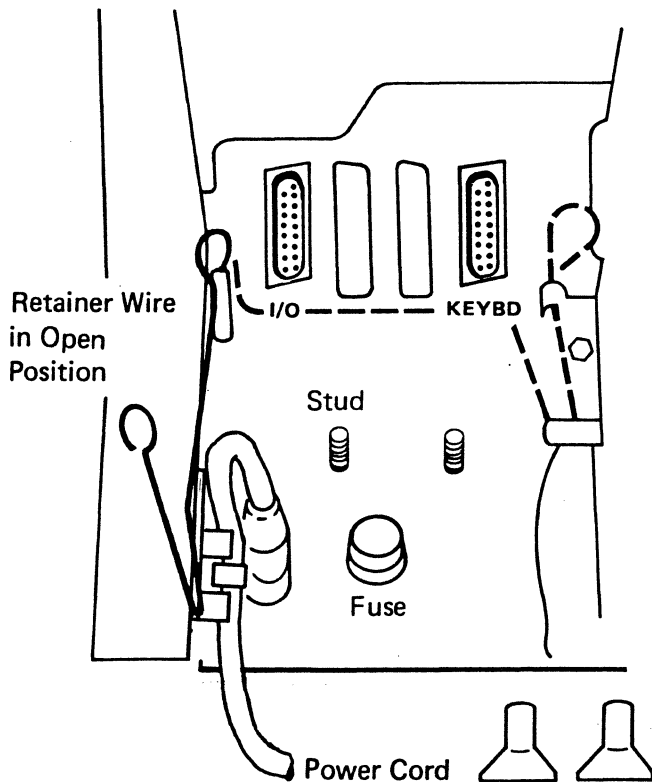
Stud
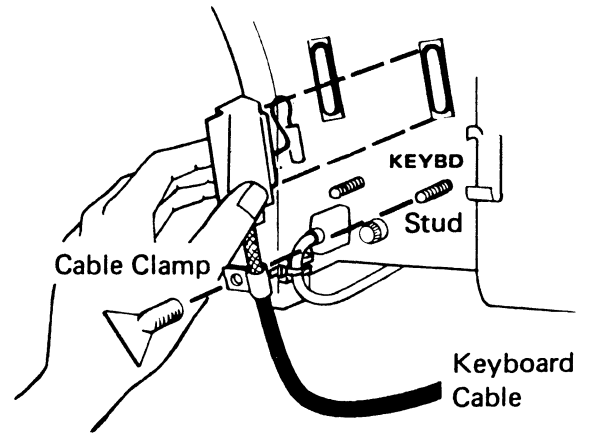
Keyboard Cable

☐ Remove the protective bag from the keyboard cable connector.

☐ Place the keyboard cable clamp over the right-hand stud. Don't be afraid to apply the necessary force. Plug the keyboard cable connector into the cable socket above the letters KEYBD.

☐ Install and tighten the wing nut.

Step 8

Ground Wire Lug

I/O

Communication Cable
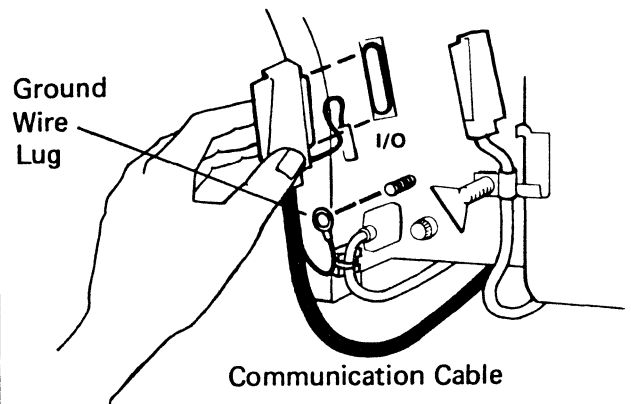
☐ Plug the communication cable connector into the cable socket above the letters I/O.

Step 9

Ground
Wire
Lug

◀ Replace
Retainer Wire
Bottom First
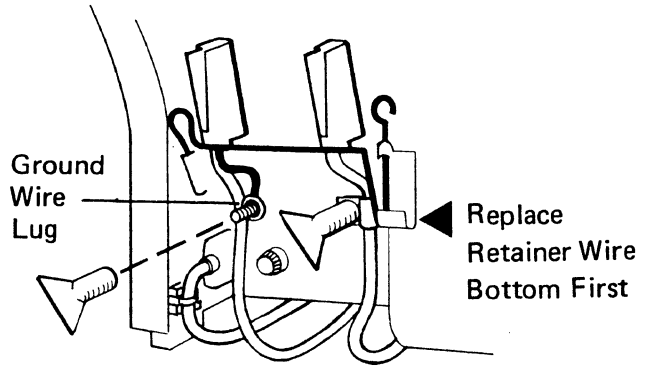
☐ Swing the retainer wire across the cable connectors. Insert the bottom of the retainer wire in the slot, and latch it in place. The retainer wire keeps the connectors tightly in place; it therefore takes some extra force to latch it. Don't be afraid to apply the necessary force.

☐ Place the ground wire lug over the stud; install and tighten the wing nut.
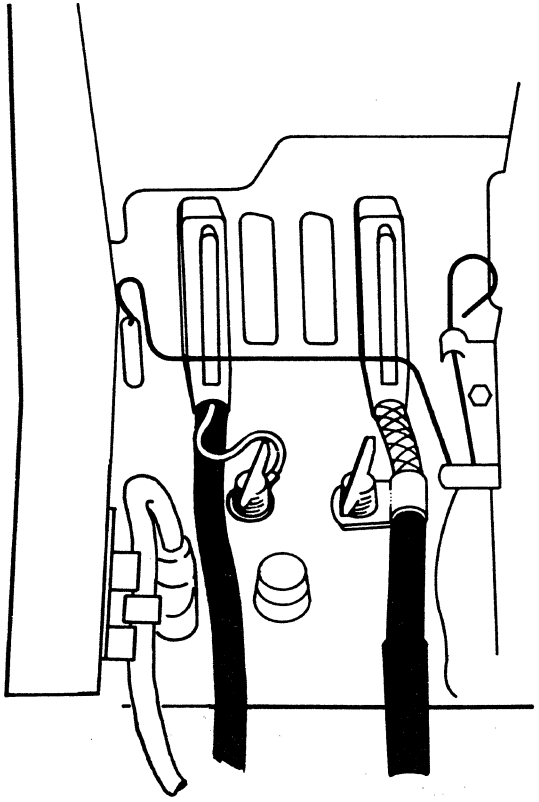
Step 10
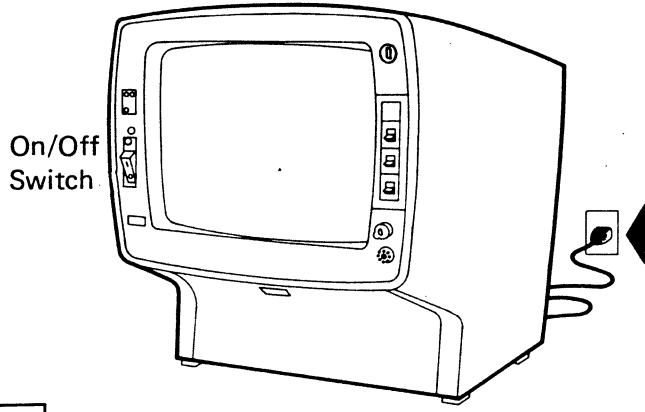
On/Off
Switch

☐ Place the power cord, communication cable, keyboard cable, etc., so they do not interfere with closing the front cover.

☐ Install the front cover on the pivot pins. Close the cover, and slide the cover latch toward you.

☐ Push the On/Off switch (located to the left of the screen) to Off.

On
Off

☐ Plug the power cord into the power outlet.

Step 11

Device Cable

To Other Terminal
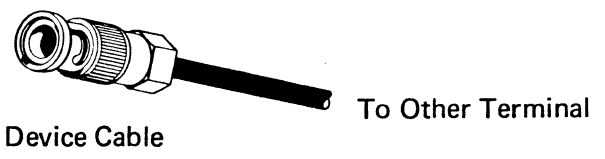
CAUTION: Do not connect or disconnect the device cables during an electrical storm.

☐ Connect the device cables to the ports on the back of the 3276, using the 3276 Device Cable Attachment chart obtained in Step 1.

Step 12

Address Keylock Key in Unlocked Position
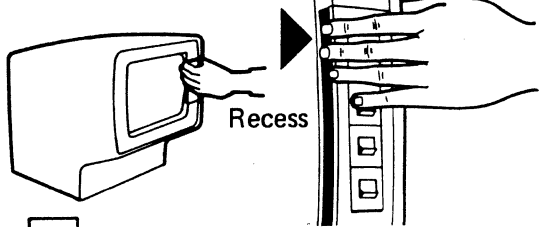
Recess

- [ ] If the display station has an address keylock, insert the key and turn it clockwise.

- [ ] Grasp the top of the operator panel drawer in the recess. Push it slightly to the right, and pull it toward you. The drawer will stop and latch (at the first stop).

Drawer at First Stop
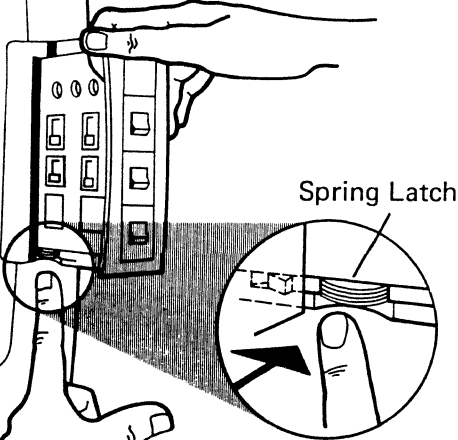
Press Spring Latch Here

Spring Latch

- [ ] Press the spring latch as shown, and continue pulling until the drawer stops again (at the second stop).
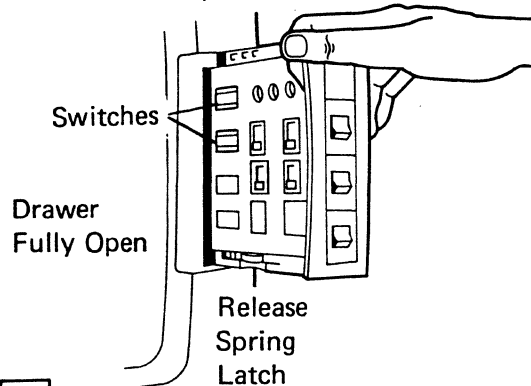
Switches

Drawer Fully Open
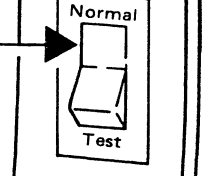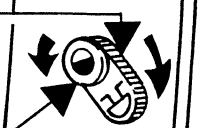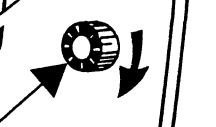
Release Spring Latch
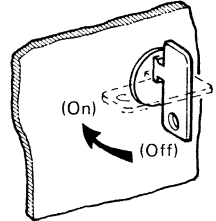
- [ ] Set the switches, using the 3276 Switch Settings chart obtained in Step 1. Ensure the On/Off switch is Off before changing any of the switches.

- [ ] Push the drawer into its original position.

- [ ] If the display station has an address keylock, turn the address keylock key counterclockwise to lock the drawer.

Step 13

Address Keylock
A,a/A Switch
Normal/Test Switch
⊞—Security Keylock
Volume Control
Contrast Control
Brightness Control
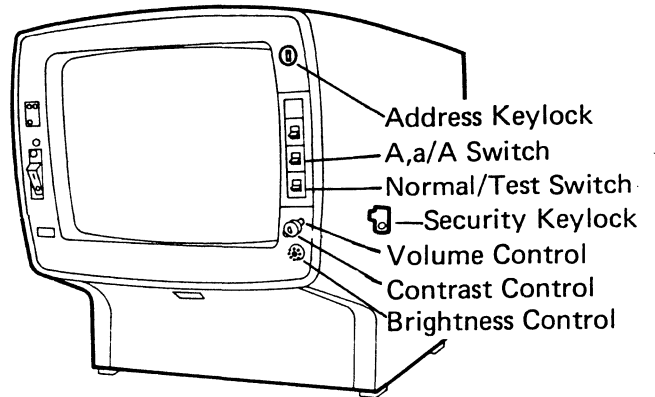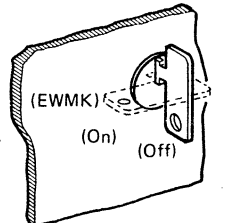
Set the following (located to the right of the screen) as indicated:

- [ ] Set this switch to Normal.

Normal

Test

- [ ] Turn the volume control for the audible alarm (if present) fully clockwise.

- [ ] Turn the contrast control fully counterclockwise.

- [ ] Turn the brightness control fully clockwise.

- [ ] If the display station has a security keylock, insert the key into the lock and turn the key clockwise (to the On position).

(On)

(Off)

If there is no security keylock, the cover will have a filler plug in this location.

- [ ] If the Encrypt/Decrypt feature is installed, the security key will have three positions, Off, On, and EWMK. Do not turn the security key to the EWMK position.

(EWMK)

(On)

(Off)

Step 14

Cursor

On Light

Horizontal Line

Operator
Information Area

Brightness
Control

☐ Move the keyboard to a convenient position in front of the display station.

☐ If the Loop Adapter feature is installed, refer to the instruction obtained in step 1, and plug the communication cable connector into the loop station connector.

☐ Push the On/Off switch to On (I). ▶ On Off

1. The on light should come on; if it does not, check with your supervisor to make sure power is available at the power outlet. On Light ▶

2. About 15 seconds after the unit is turned on:

   a. A short horizontal line (cursor) will appear at the upper-left corner of the screen. Ignore any 8-digit number, consisting of 1's and/or 0's, cursor being under the first digit.

   b. A horizontal line will appear across the bottom of the screen. (The area below this line is the Operator Information Area.)

☐ Adjust the Brightness ⚙ control, if necessary.

If result 1 or 2 does not occur, retry by turning the display station off, then on again.

If result 1 or 2 still does not occur, or ✕ ⋈ nn is displayed record this step on a 3276/3278/3279 Problem Report Form (GX23-0201), to be found with the papers shipped with the display station.

☐ If the Encrypt/Decrypt feature is installed, call your security representative to enter a master key into the 3276.

Step 15

Set the following switches (located to the right of the screen):

☐ First, set this switch to "A,a." ▶

A, a

A

Normal

☐ Then, set this switch to Test. ⟶ ▶

Test

Expected Result: The screen, except on Model 1 or 11, should fill up with characters.

Model 1 or 11

Cursor ⟶

Horizontal Line⟶

Operator Information Area

All Other Models

Cursor ⟶

Horizontal Line⟶

Operator Information Area

Notes:

1. *The cursor appears in the upper-left corner, the first position of the first line.*

2. *There is a solid horizontal line at the lower part of the screen, below which is the Operator Information Area.*

If the above does not happen, fill out a 3276/3278/3279 Problem Report Form (GX23-0201), and notify your supervisor.

Step 16

Unit Address
(Use address
labels shipped
with unit.)

Model No.

3276 ②

Serial No.

☐ Scan the top two lines of the display. They should be the same as those shown below for the model number of your display station. (The size and style of the characters will vary by model.)

Model 1 or 11

àè ì ôûåõÿàèé ì ôùûⴄ₵5bôûàê ì ôûáé í ôûñÀÈ ì ÔÙÃÖYAEE I OUYCAÈ Í ÖÛÂÊ Í ÔÛÁÉ Í ÔÛÑabcdef ghi jklmnop
ⴄrs tuvwxyzⴄⴄⴄ₵J₮ABCDEFGHI JKLMNOPQRSTUVWXYZⴄØÅÇ;*01234567><[ ])()(='"/\| |?!$¢£¥₧Ҳ

Model 2, 3, 4, 12, 13, or 14

àè ì ôûàê ì ôûáé í ôûñÀÈ ì ÔÙÃÖYAEE I OUYCAÈ Í ÖÛÂÊ Í ÔÛÁÉ Í ÔÛÑabcdef ghi jkl mnopqrs tuvwxyzⴄⴄⴄ₵J₮
ABCDEFGHI JKLMNOPQRSTUVWXYZⴄØÅÇ;*01234567><[ ])()(='"/\| |?!$¢£¥₧Ҳ0123456789ß§#@%_

☐ Scan the Operator Information Area (bottom of screen, below the solid horizontal line). The characters should be the same as those shown below for the model number of your display station. (The size and style of the characters will vary by model.)

Model 1 or 11

01234567><[ ])()(='"/\| |?!$¢£¥₧Ҳ0123456789ß§#@%_&-.,:+⁻⁻•˘˄˜···˙´‚

Model 2, 3, 4, 12, 13, or 14

01234567><[ ])()(='"/\| |?!$¢£¥₧Ҳ0123456789ß§#@%_&-.,:+⁻⁻•˘˄˜···˙´‚àè ì ôûåõÿàèé ì ôûûⴄ

If the lines of displayed characters are different from the above, turn the display station off then on, and repeat this step.

If the characters are still different, record this step on a 3276/3278/3279 Problem Report Form (GX23-0201), to be found with the papers shipped with the display station, and notify your supervisor.

Step 17

This step is to ensure that each key on the keyboard works correctly. The procedure is to press each key on the keyboard, observe the character displayed on the screen, and compare this character with that shown in the keyboard diagram below for the key pressed.

In this diagram the keys are shown with the character that should be displayed when the key is pressed. Remember, go by the characters shown in the diagram not by the characters on the keyboard keytops.

The cursor will move to the next position on the screen as each key is pressed. You may press the spacebar (blank) after each key is pressed in order to see the characters more easily as they appear on the screen.

☐ Notice in the diagram that there is a group of keys at the extreme right labeled "a" through "l". If your keyboard does not have these keys, cross them out in the diagram.

Note: *Some keys, if held down for about 1 second, will repeat the character. Also, during the following procedure, the key marked CONTROL in the diagram must not be pressed.*

☐ Press, one at a time, the four keys shown in the diagram with the double characters mm, nn, oo, and pp, and observe the characters displayed. These four keys each display one character when the key is pressed and repeat the character when the key is released.

☐ Press the remaining keys, one by one, and check that the character shown in the diagram for that key is displayed.

If the displayed results differ from what is shown in the diagram, turn the display station off and on again. Wait for the display to reappear. Now retry this step.

If the displayed results continue to be different, record this step on a 3276/3278/3279 Problem Report Form (GX23-0201), to be found with the papers shipped with the display station, and notify your supervisor.

Characters Displayed When in Test Mode
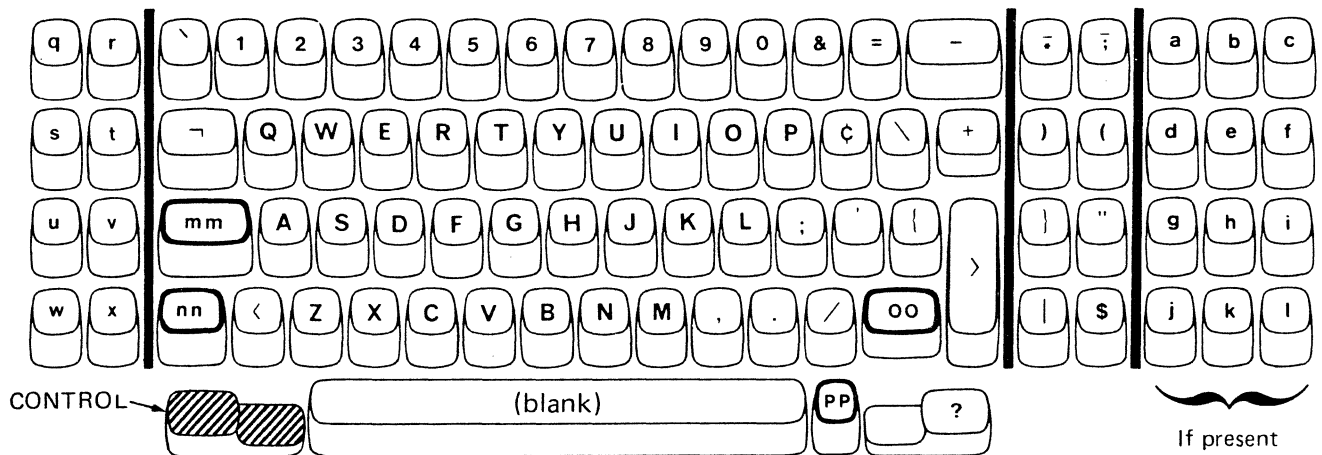
CONTROL — Labeled "RESET" on Typewriter or Data Entry keyboards
Labeled "PF10" on Data Entry keypunch keyboards

If present

Step 18

Again, use the diagram provided in Step 17, "Characters Displayed When in Test Mode," not the characters on the keyboard, to identify the correct key to be pressed. The CONTROL key starts each check. It is important that the CONTROL key be used only when indicated. If a wrong key is used or a key is held down for more than 1 second, turn power off, then on, to restart this step.

1. Press the CONTROL key, then the C key, once.

   CONTROL then C

   All previously entered characters are replaced by the test pattern.

2. Press the CONTROL key, then the B key, once.

   CONTROL then B

   $\overline{2}$ is displayed in the first position of the Operator Information Area at the bottom of the screen.

3. Press the CONTROL key, then the B key three times.

   CONTROL then B, then B, then B

   $\overline{0}$ appears in the first position of the Operator Information Area.

4. Press the CONTROL key, then the M, A, B, and C keys, once each.

   CONTROL then M, then A, then B, then C

   ABC appears at the start of the first line of the display.

5. Set the Normal/Test switch to Normal. The test pattern is cleared from the screen.

6. Pull out the operator panel drawer, as described in Step 12, until it stops and latches (at the first stop). Check if the Machine Check light is off and the Test light is off or blinking; if so, push the drawer in to its original position; if not, report the symptom on a 3276/3278/3279 Problem Report Form (GX23-0201), to be found with the papers shipped with the display station and notify your supervisor.

One of the following 8-digit numbers should appear in the first row on the screen.

11000000	Terminal adapter is not attached to the 3276.
11110000	One terminal adapter is attached to the 3276.
11111100	Two terminal adapters are attached to the 3276.
11111111	Three terminal adapters are attached to the 3276.

The 3276 setup is completed. If your display station has the Magnetic Accessory Adapter feature, a cable with connector is located on the left side of the display. See the instruction book packed with the accessory to connect it.

The Selector Light Pen, APL, Text, and Magnetic Slot Reader features may now be checked by performing the applicable checks in Section 4 of the *3276 Problem Determination Guide,* which is under the keyboard cover.

Notify your supervisor that the 3276 setup is completed, and that the 3276 communication cable may be connected to the communication facility according to the instructions obtained in Step 1. The communication cable must be connected in accordance with local regulations.

After the communication cable is connected, the 3276 can communicate with the host.

Note: *Retain this document for use in the event the units are relocated.*

The following illustrations show charts that you are to obtain in Step 1, and they are taken from *IBM 3270 Information Display System: IBM 3276 Control Unit Display Station Planning and Setup Guide*, GA18-2041.

REFERENCE ONLY

C. Communications Cable Connection Instructions

Appendix C. 3276 Communication Cable Connection Instructions

3276 Communication Cable Connection Instructions
3276 with an Integrated Modem Attached to a Nonswitched Line
(U.S. and Canada only)

☐ Plug the four-prong plug attached to the communication cable marked NONSWITCHED into the four-pin receptacle connected to the nonswitched line.

Label-NONSWITCHED

To Nonswitched Line
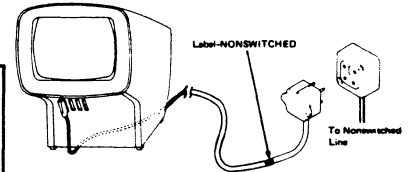
B. Switch Settings

3276 Switch Settings Form

The operator panel drawer is located to the right of the display screen. To gain access to the switches, grasp the top of the drawer in the recess. Push it slightly to the right, and pull it toward you. The drawer will stop and latch at the first stop. (If the 3276 has the Address Keylock feature, insert the key into the lock and turn the key clockwise until it stops.) Press spring (located on the lower left side of the door), and continue to pull until the drawer stops again. After you have set the switches according to the chart below, push the drawer back to its closed position. (If the 3276 has the Address Keylock feature, turn the key counter-clockwise and remove the key.)

☐ Switch off the 3276 power.
☐ Set the 3276 Operator Panel Drawer switches to the positions that are checked in the tables on this page.
DO NOT Set any switches that are associated with any tables that are crossed out.
☐ Switch on the 3276 power.
DO NOT Change the position of switches while power is on. Changing a switch position while power is on has no effect.
BU switches can be changed while power is on.

A. Device Cable Attachment

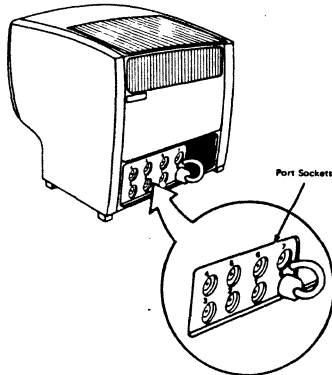Appendix B. 3276 Device Cable Attachment

☐ Use the table and the figure below to connect the device cables to the 3276 ports.

1. Use a push-and-twist motion to the right to connect and lock the device cables to the port sockets.

2. Connect the device cable identified for port 1 to the port 1 socket, port 2 to the port 2 socket, and so on. Connect the cables in numeric order, starting at port 1.

Note: *Port 0 must be the 3276 Integral Display.*

CAUTION
Do not connect or disconnect device cables during an electrical storm.

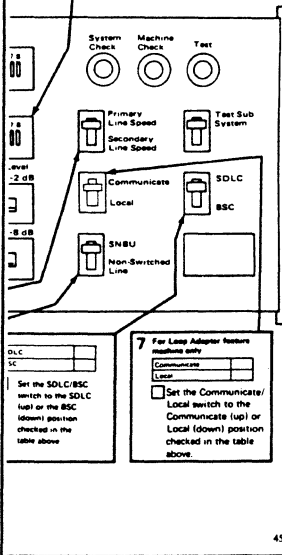| 3276 Port	BSC Device No.	SNA LU Address	Cable Identification	Unit Type	Unit Location	Telephone Nearest the Unit
0	0	02	Integrated Cable	3276 Integral Display		
1	1	03				
2	2	04				
3	3	05				
4	4	06				
5	5	07				
6	6	08				
7	7	09				

Port Sockets

For Loop Adapter feature machine only
☐ Set the B switch positions 6, 7, and 8 to the ON or OFF positions checked in the table below.

Quick reference of switch settings for line speed selection is located below the B switch in the Operator Panel Drawer.

System Check   Machine Check   Test

Primary Line Speed   Test Sub System
Secondary Line Speed

Communicate   SDLC
Local   BSC

SNBU
Non-Switched Line

Set the SDLC/BSC switch to the SDLC (up) or the BSC (down) position checked in the table above.

7 For Loop Adapter feature machine only
☐ Set the Communicate/Local switch to the Communicate (up) or Local (down) position checked in the table above.

19

21

45